

### REMARKS

No claims have been added, cancelled or amended. Claims 1-2, 3-11, 14-19, 21-22 and 27-28 are pending in the application.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

The present Action appears to miss Applicants' argument.

Fuel cells are a device for directly converting chemical energy to electrical energy. Most fuel cells rely on an internal membrane and catalyst to accomplish this conversion. Trace amounts of contaminants can poison the fuel cell, substantially degrading fuel cell performance and fuel cell life. Some known contaminants include silicon, inorganic cations, metallic cations, sulfur, ammonia and amines. Fuel cell gaskets and seals have been found to be a source of fuel cell contaminants. See attached U.S. Patent No. 7,569,082 to Valentine et al, with bracketed text added: "Fourth, if adhesive is used to attach [fuel cell components], the adhesive must not adversely affect [fuel cell component] performance." (column 1, lines 36-37) and "Furthermore, the adhesive . . . must not introduce any contamination to the [fuel cell components]." (column 1, lines 52-54). However, while fuel cell contamination is a known problem, the sources and identity of contaminants is still a subject of research. Applicants' last response points to numerous references discussing the problem of fuel cell contamination and elimination of sources of fuel cell contamination.

Fuel cells are expensive to buy and replace. Fuel cell life is too short for widespread use. Thus, fuel cells remain an expensive, relatively rare device used in very limited applications where their benefits outbalance their costs. Because of their rarity and expense fuel cells are assembled using carefully screened materials under carefully controlled conditions in limited quantities. See attached Valentine Patent: "The

[fuel cell electrode assembly] fabrication process is carried out in a clean room environment." (column 2, lines 35-36). Another step taken to maximize fuel cell life, as pointed out in the previously submitted references, is controlling or eliminating potential sources of contamination, for example in gaskets and seals. However, there remains uncertainty as to the sources and identity of all fuel cell contaminants.

Deviny teaches the use of complexed initiator systems including a complexed initiator component and a carboxylic acid decomplexer. (abstract) The "initiator component" typically comprises an organoborane amine complex (a salt comprising a boron containing ion and an amine ion, see paragraph 0071) and an optional diluent. When mixed with the polymerizable composition, the decomplexer in the polymerizable composition liberates the initiator (e.g., organoborane ion) from the complexer (e.g., amine ion), enabling polymerization of the monomer to be initiated. (paragraphs 0041, 0046, 0067) The decomplexer is "capable of" forming an ionic bond with the amine cation of the organoborane amine complex during liberation. (0047) There is no teaching or suggestion that all of the liberated amine cations are ionically bonded to the complexer. In fact, Deviny at paragraph 0009 teaches that it is known for amine components to migrate to the surface of the adhesive and cause problems in some applications. There is no teaching or suggestion that the weak ionic bond between the decomplexer and amine cation is permanent in the wet environment of a fuel cell (the waste products of a fuel cell are water) or that the weakly ionically bonded amine complex will not poison a fuel cell catalyst or contaminate a fuel cell.

Briefly summarized, the record teaches that fuel cells are expensive; fuel cell life can be shortened by contamination; the source and identity of all fuel cell components is uncertain and use of materials that might contaminate an expensive fuel cell with contaminants such as metals or amines should be avoided. Deviny teaches a material comprising a metal amine salt that dissociates during use and may migrate from the adhesive.

A skilled person at the time of Applicants invention would avoid use of materials, such as Deviny's metals and amines, known or suspected to contaminate fuel cells and shorten their life, especially use in fuel cell seals which are a known source of fuel cell contaminants. A skilled person at the time of Applicants' invention would have no expectation of success in using the Deviny materials comprising known fuel cell contaminants (metals and amines) in a fuel cell location known to be a source of contamination (seals). The proposed combination lacks the predictability and reasonable expectation of success required for a *prima facie* obviousness rejection. Claims 1-2, 4-11, 17, 21-22 and 27-28 are not obvious and are patentable for at least this reason.

A skilled person at the time of Applicants' invention would have no motivation to use the Deviny materials comprising known fuel cell contaminants (metals and amines) in a fuel cell location known to be a source of contamination (seals). The proposed combination lacks the motivation required for a *prima facie* obviousness rejection. Claims 1-2, 4-11, 17, 21-22 and 27-28 are not obvious and are patentable for at least this reason.

The record teaches that fuel cell contaminants undesirably shorten fuel cell life and should be avoided in fuel cell use. The record teaches against use of materials that are known fuel cell contaminants (liberated amine cations and weakly bonded amine complexes) in a fuel cell location known to be a source of contamination (seals). The record teaches against the proposed combination. Claims 1-2, 4-11, 17, 21-22 and 27-28 are not obvious and are patentable for at least this reason.

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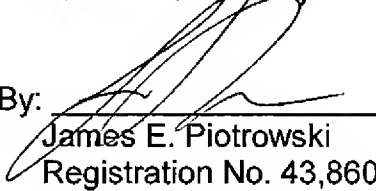
In summary, Applicant has addressed each of the rejections in the present Office Action. It is believed the application now stands in condition for allowance, and prompt favorable action thereon is respectfully solicited.

The Examiner is invited to contact Applicant's attorney if a conversation will hasten prosecution of this application. Applicant's undersigned attorney may be reached by telephone at (860) 571-2501, by facsimile at (860) 571-5028 or by email at james.piotrowski@us.henkel.com. All postal correspondence should be directed to the address given below.

Respectfully submitted,

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